

WHAT IS CLAIMED IS:

1. An image processing system for carrying out image processing on an image recorded on a color photographic photosensitive material which has at least three types of photographic photosensitive layers containing blue-light-photosensitive, green-light-photosensitive, and red-light-photosensitive silver halide emulsions on a light transmissible supporting member, and which is processed such that a silver image is generated in the photographic photosensitive layers after exposure of an image, said image processing system comprising:

a light source for irradiating a light to a front side and a back side of the color photographic photosensitive material;

a reading sensor for reading image information by light reflected from the front side and the back side of the color photographic photosensitive material, and light transmitted through the color photographic photosensitive material;

an exposing device for exposing a predetermined unexposed area of the color photographic photosensitive material by each blue, green, and red light;

a calculating device for determining correction conditions for correcting image information of each color on the basis of the lights reflected from the front side and a back side of the color photographic photosensitive material in

an area exposed by each color and the light transmitted through the color photographic photosensitive material; and

a correcting device for correcting a read image in accordance with the correction conditions.

2. The image processing system according to claim 1, wherein the calculating device determines the correction conditions after converting each reflection density obtained by the lights reflected from the front side and the back side of the color photographic photosensitive material to a transmission density.

3. The image processing system according to claim 1, wherein the correction conditions are conditions for correcting color mixing of respective colors.

4. The image processing system according to claim 1, wherein the exposing device carries out gray exposure on the predetermined unexposed area of the color photographic photosensitive material, the calculating device further determines the correction conditions for correcting gray balance and contrast based on the light reflected from the front side and the back side of the color photographic photosensitive material and the light transmitted through the color photographic photosensitive material, and the correcting device carries out at least one of non-linearity correction of the read image, gray balance correction of the read image, and contrast correction of the read image in accordance with the

correction conditions.

5. The image processing system according to claim 1, wherein the calculating device further determines the correction conditions for correcting gray balance based on lights reflected from the front side and the back side of the unexposed area of the color photographic photosensitive material and light transmitted through the unexposed area of the color photographic photosensitive material, and the correcting device or corrects the gray balance of the read image in accordance with by the correction conditions.

6. The image processing system according to claim 1, further comprising a setting device for setting the correction conditions for correcting the read image information.

7. The image processing system according to claim 6, wherein the correction conditions are determined in advance such that a first image recorded on the color photographic photosensitive material, which has been processed such that a silver image has been generated in the photographic photosensitive layers after exposure of the image, coincides with a second image recorded on the color photographic photosensitive material, which has been processed so as to generate a dye image by eliminating the silver image.

8. The image processing system according to claim 6, wherein the setting device sets the correction conditions for each type of color photographic photosensitive material based

on a plurality of image information read by the reading sensor.

9. The image processing system according to claim 1, further comprising a storing device for storing the correction conditions for each type of color photographic sensitive material, and a detecting device for detecting the type of the color photographic photosensitive material, wherein the correcting device corrects the read image in accordance with correction conditions stored in the storing device corresponding to the detected type of color photographic photosensitive material.

10. The image processing system according to claim 1, further comprising a setting device for setting reading conditions on the basis of light reflected from the front side and the back side of the unexposed area of the color photographic photosensitive material and light transmitted through the unexposed area of the color photographic photosensitive material.

11. An image processing system for carrying out image processing on an image recorded on a color photographic photosensitive material which has at least three types of photographic photosensitive layers containing blue photosensitive, green photosensitive, and red photosensitive silver halide emulsions on a light transmissible supporting member, and which is processed such that a silver image is generated in the photographic photosensitive layers after

exposure of an image, said image processing system comprising:

a light source for irradiating light onto a front side and a back side of the color photographic photosensitive material, and

a reading sensor for reading, at a low resolution, reflected image information based on lights reflected from the front side and the back side of the color photographic photosensitive material, and for reading, at a high resolution, image information based on light transmitted through the color photographic photosensitive material.

12. The image processing system according to claim 11, further comprising a generating device for generating image information by extracting high frequency component information from transmitted image information read by the reading sensor, and combining the extracted high frequency component information and reflected image information read by the reading sensor.

13. The image processing system according to claim 12, wherein the generating device further extracts low frequency component information from the reflected image information read by the reading sensor, and combines the extracted low frequency component information and the high frequency component information.

14. The image processing system according to claim 12, wherein the generating device combines the high frequency

component information after subjecting the high frequency component information to a sharpness processing.

15. The image processing system according to claim 11, wherein the reading sensor includes a plurality of photoelectric conversion elements for the photoelectric conversion of the reflected light, and the image processing system further comprises a moving device for moving the reading sensor in a predetermined direction during photoelectric conversion by the photoelectric conversion elements.

16. The image processing system according to claim 11, wherein the reading sensor includes a plurality of photoelectric conversion elements for the photoelectric conversion of the reflected light, and combines outputs from adjacent photoelectric conversion elements.

17. The image processing system according to claim 11, wherein the reading sensor comprises a front side low resolution sensor for reading, at a low resolution, reflected image information based on light reflected from the front side of the color photographic photosensitive material; a back side low resolution sensor for reading, at a low resolution, reflected image information based on light reflected from the back side of the color photographic photosensitive material; and a high resolution sensor for reading, at a high resolution, transmitted image information based on light transmitted through the color photographic photosensitive material.

18. The image processing system according to claim 11; wherein the reading sensor comprises a common sensor for reading, at a low resolution reflected image information based on light reflected from one of the front side and the back side of the color photographic photosensitive material, and for reading, at a high resolution, transmitted image information based on light transmitted through the color photographic photosensitive material; and a low resolution sensor for reading, at a low resolution, reflected image information based on a light beam reflected by another of the front side and the back side of the color photographic photosensitive material.

19. An image processing system for carrying out image processing on an image recorded on a color photographic photosensitive material which has at least three types of photographic photosensitive layers containing blue photosensitive, green photosensitive, and red photosensitive silver halide emulsions on a light transmissible supporting member, and which is processed such that an image including a silver image and a dye image is generated in the photographic photosensitive layers after exposure of an image, said image processing system comprising:

a first light source for irradiating infrared light onto the color photographic photosensitive material such that the infrared light is transmitted through the photographic photosensitive layer of an intermediate layer;

a second light source for irradiating , onto the color photographic photosensitive layer, complementary color light of a color complementary to the dye contained in the image in the photographic photosensitive layer of the intermediate layer, such that the complementary color light is transmitted through the intermediate layer;

a reading sensor for reading first transmitted image information based on the infrared light transmitted through the color photographic photosensitive material, as well as second transmitted image information based on the complementary color light transmitted through the color photographic photosensitive material; and

a calculating device for obtaining image information of the intermediate layer by calculation using the second transmitted image information and the first transmitted image information.

20. The image processing system according to claim 19, wherein the first light source irradiates infrared light onto a front side and a back side of the color photographic photosensitive material, and the reading sensor reads reflected images of upper and lower photographic photosensitive layers based on infrared light reflected by an emulsion surface side and a supporting member side of the color photographic photosensitive material.

21. The image processing system according to claim 19,



wherein the second light source includes:

an upper layer light source for irradiating, onto an upper photographic photosensitive layer, first complementary color light of a color complementary to dye contained in an image of the upper photographic photosensitive layer;

a lower layer light source for irradiating, onto a lower photographic photosensitive layer, second complementary color light of a color complementary to dye contained in an image of the lower photographic photosensitive layer; and

an intermediate layer light source for irradiating, onto the color photographic photosensitive material, third complementary color light of a color complementary to coloring matter contained in a silver image of an intermediate photographic photosensitive material layer, such that the third complementary color light is transmitted through the intermediate layer,

wherein the image processing system further comprises a reading sensor for reading reflected images of the upper and lower photographic photosensitive layers based on the first complementary color light and the second complementary color light reflected by an emulsion surface side and an supporting member side of the color photographic photosensitive material, and for reading first transmitted image information based on infrared light transmitted through the color photographic photosensitive material, and for reading second transmitted

image information based on the third complementary color light transmitted through the color photographic photosensitive material.